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# Rural Lines

RURAL ELECTRIFICATION ADMINISTRATION • U. S. DEPARTMENT OF AGRICULTURE



Spreading the Light of Progress

## SPECIAL REPORT:

## THE FUTURE OF RURAL AMERICA



## A Message from the ADMINISTRATOR

The great objective of rural electrification since 1935 has been to bring better living to rural people through the blessings of electricity. For more than a quarter century, REA has dedicated itself to this goal. We are all aware of the problems that this agency has had to face. The challenges have been great—but the achievements have been greater.

Now we pause to look to the challenges and promises of the future. This issue of *Rural Lines* represents an attempt to describe, on the basis of present trends, what kind of rural America will be in existence 10 to 20 years from now. In the rural world of a decade or two from today, electrical power will be used in quantities and in ways we can hardly imagine.

The plans and programs that REA and its borrowers work on today will vitally affect the rural electrification of tomorrow. We must provide sufficient power, in increasing amounts, at prices as low as possible. We must continue to insist that the right of rural electric cooperatives to establish generation and transmission facilities in order to assure their future security shall remain unimpaired. We must help to preserve the integrity of borrowers' territory.

Thomas Edison, as famous for his vision as he was for his inventions, recognized the potentialities of electrification. The prediction he made in 1931 still is true today. "The electrical development of America has only well begun."

  
Administrator

## Rural Lines

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*Samuel Levenson, Editor*

*Contributors to this issue: Ken Jones, Bernard Krug.*

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# The General Picture

The changes taking place in agriculture and other aspects of rural life are massive and rapid. A new rural America is swiftly developing. As one authority puts it:

"Changes are taking place faster in contemporary U. S. agriculture than at any other time in the history of the world. The need was never greater for people to be acquainted with the true situation in all phases of agriculture and in rural society and the likely trends in the next decade."

Let us first summarize these major changes and their impact on people and organizations.

There is greater diversity of people in the present-day rural community. The occupational structure is changing. There is increased intermingling of nonfarm rural residents with farm people. Greater numbers of farmers are working off their farms. More women are employed outside the farm home. Families are more mobile.

The technological revolution in agriculture is producing many changes in the structure of farming. Farms are fewer and larger, with more integrated business operations, increased capital requirements, greater dependence on services from off the farm. Farmers are more specialized and more mechanized, with greatly increased productivity.

Changes are also taking place in rural institutions and services. Institutions are larger and more complex; there is greater dependence on services beyond the immediate locality. The kinds of organizations have increased, as has membership in special interest groups. Schools are being consolidated. Numerous changes in communication and transportation are taking place.

Serious maladjustments of community services and local government are apparent.

## *Population*

Three of the most significant trends in our recent history are: (1) the big boom in our total population since 1940, (2) the urban sprawl or flight of city people to suburban fringe areas, including much scattered settlement of nonfarm families in the country-side, and (3) a big decline in the farm population. The percent of the total population living on farms has declined from 23 percent in 1940 to about 8 percent today. However, the rural population has not declined because the great increase in rural nonfarm population has offset the drop in farm population. Nonfarm population living in rural areas outnumbers farm population nearly 3 to 1.

The Nation's greatest population increase has occurred in the unincorporated areas near large cities and in open country or rural nonfarm areas.

Population distribution and composition are shifting. There is a marked scarcity of young people in their 20's, while the proportion of elderly and preschool and school children in rural areas is increasing.

## *Family Life*

Farm people are depending more on income from off-farm sources. This affects the nature and extent of farm family interaction. The amount of time family members spend with one another is decreasing. The pace and tempo of family living has increased tremendously. The diversity of family interests results in various members pursuing their individual activities. Family time together tends to be

crowded aside in a seemingly relentless schedule.

Decentralization of industry and decreasing opportunities in farming are bringing increased moving. This is causing adjustments in the social and economic structure of families and in communities.

The "push" away from farms due to lack of home conveniences and other low standards of living is not such an important factor in the migration of farm people today as it used to be. Today "pull" factors like job opportunities are more important.

The composition of the labor force is changing, including more women from the farm population. Over 2 million farm residents are working primarily at nonfarm work. Forty percent of these are women.

### *Structure of Farming*

It has become commonplace to look at the changes occurring on American farms and speak of the revolution in farming. The revolution is marked by a rapid and continuing change in the productivity of resources. This is the result of mechanization, improved crop varieties and a host of other technical innovations.

The technological revolution in American agriculture has enabled farmers to increase their production nearly one and a half times as fast as population has grown.

Output per man-hour of farm work is over three times what it was about 20 years ago, a rise much faster than that in industry. The cumulative improvement in production efficiency since 1940 is equivalent to a saving in farm production resources of around \$7 billion a year.

Yes, the revolution in farming has brought great progress toward a more efficient agriculture. But it has also brought problems.

The capital required to break into farming as an occupation is going up steadily. The number of farms is decreasing, the size increasing, and specialization in production increasing. Mechanization of farms is displacing small independent farmers and farm laborers. With these changes come problems in occupational adjustment and community integration.

Since 1954 the number of farms has decreased nearly 25 percent. Of these a little more than half produce over 90 percent of total market sales. The remainder sell less than \$2,500 worth of farm products annually.

The size of farms has become steadily larger in acreage, increasing from an average of 138 acres in 1910 to 174 acres in 1940 and 302 acres at the present time—up 25 percent since 1954.

The amount of production capital per farm has more than doubled since 1950. On many commercial farms this figure is now \$50,000 and up. The total investment in farm machinery and motor vehicles, for example, is six times what it was in 1940. The investment per worker in farming now averages roughly \$23,000. However, returns to labor for an hour of farm work average only 95 cents, compared to earnings from an hour's factory work of \$2.32.

With high fixed investments and greater dependence on purchased supplies, farmers are also more vulnerable to market fluctuations. Realized net income is now (1961) only 33 percent of gross farm income as compared with 50 percent in 1948. Despite recent gains, the cost-price squeeze is very real. This creates the drive for efficiency and more technology to beat it.

### *The Problems of Success*

The crux of the problem as it has emerged in recent years is twofold. Despite smaller crop acreage and shrinking labor supply, farm output, thanks



*Old and new America — in juxtaposition.*

to technological advances, is increasing faster than the demand for food and fiber. Secondly, those farmers with inadequate units and capital are proving unable to compete. They are being bypassed in the march of technology. As a result, more than a million farm families, concentrated largely in the South, have too few farm resources to provide full-time employment and reach a satisfactory level of living.

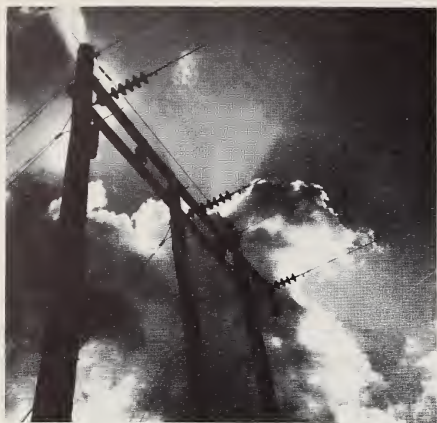
All this must not be permitted to obscure the fact that the story of American agriculture in recent times is a success story of a magnitude unparalleled in history. It has had wide ramifications. It enables the American worker to obtain 48 eggs for an hour's work, as compared to 22 eggs in the early postwar years. It enables him to buy 37 pounds of potatoes instead of 24, 3.9 pounds of chuck roast instead of 2.3 pounds. He spends only 20 cents of his disposable income on food instead of 25 cents.

It has increased farm income, upon which so much of our industrial production and services depend. Agriculture creates so much employment that 4 out of every 10 jobs in private employment relate to agriculture. And this success enables the United States to be the world's largest exporter of agricultural products.

It is a success story which has had and is having incalculable consequences on the thinking of people in other countries. As Secretary of Agriculture Orville L. Freeman puts it, "From our farms, we are sending them desperately needed food, knowledge of modern methods, and, perhaps most important of all, an example of what man can do in freedom."

These are some of the things which should be borne in mind as we tackle, during the next decade, the problems raised by the profound and varied changes that have been wrought in rural America. □





# POWER FOR TOMORROW

The population of the United States is growing at the rate of two million people per year. By 1975, it is expected to pass 200 million. These people will need food, shelter, clothing, water—and enormous quantities of electric power. REA-financed electric cooperatives must plan the most efficient methods of taking care of this future demand.

Certain major and relatively new uses for electric power will push the demand upward. Electric heating is one. In just a few years residential heating with electricity has passed from a novelty to an established and accepted heating competitor. Builders have accepted electric heating and put it to work in entire residential developments, large apartment buildings, schools, churches—in fact, almost every kind of structure.

Electric heating is only one element in a promising future. There are others. Farmers are using electricity as a substitute for human energy in several farm tasks which have resisted mechanization only until recently: materials handling, crop drying, stock feeding.

When World War II ended, REA-financed systems required 2½ billion kilowatt-hours to stay in business.

Fifteen years later, in 1961, these requirements had grown to more than 31.4 billion kwh, or more than ten times as much. This phenomenal rate of growth was double that of the total electric industry. The most recent estimates completed by REA indicate that, by 1975, REA borrowers will require 81.5 billion kwh to satisfy the demand of their consumers.

In the industry as a whole, consumer usage doubles about every 10 years.

While loads of REA borrowers will continue to grow for some time at a rate faster than that, it is not an inexorable law of nature that they will double every 7, 8 or 9 years. It is certainly not true that power demand on any individual system will double in less than a decade whether the cooperative does anything about it or not. The cooperative cannot sit back and wait for the higher and higher figures to come in automatically.

Doubling of demand will depend on the increasing application of electricity to farm and home chores. It will depend, perhaps, on the continued and increasing popularity of electric house heating. It assumes that new electrically-powered consumer goods will come on the market—new inventions





*Through these controls a farmer dries 144 bushels of shelled corn and small grains in 2 hours, at 30% moisture.*

which will have an upward influence on demand. The emergence of the television set influenced power demand during the last decade. Doubling of demand presupposes that another popular invention, such as heat pumps, is waiting in the wings.

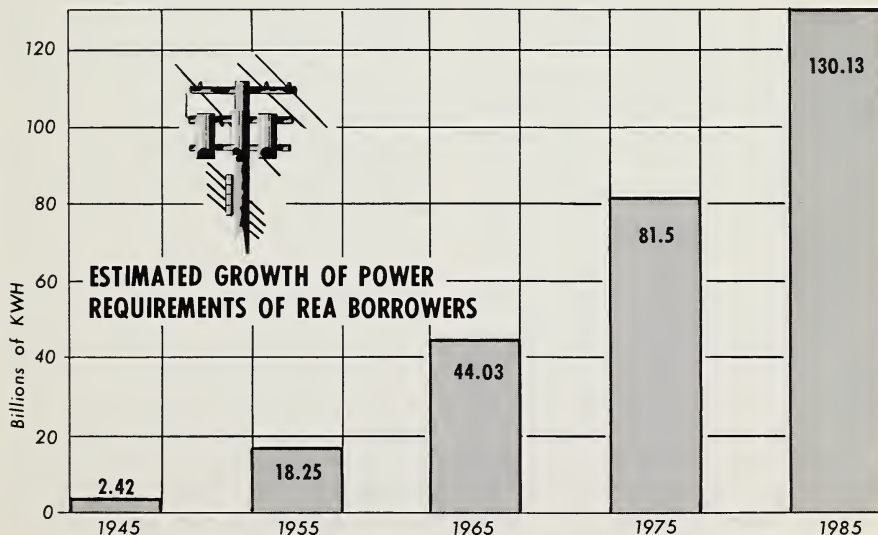
In addition, the borrower must continue and expand a hard-hitting power use program. He must expect the movement of new consumers from urban

areas to the country, and onto co-op lines, to continue.

This final assumption is a significant one. As areas served by REA borrowers become more urban, pressure from commercial companies, municipal systems, and suppliers of other fuels to serve these areas spotlights the vital need for territorial protection. If the REA electric borrower is to continue serving its present territory, and add new users, it must place greater emphasis on expenditures for system improvement, and on maintaining a reasonable schedule of retail rates. With these two important talking points, borrower management can say to consumers, both present and future:

"We have the power to satisfy your demands, and we propose a fair and equitable charge for that power."

The future belongs to those who prepare for it. Planning and providing a rural electric system to meet the increased loads the future will bring is one of the major challenges of tomorrow.



# ELECTROMATION: KEY TO PRODUCTION

by J. P. Schaezner, Agricultural Engineer, REA

The farmer of the future will function in an agricultural system whose full form and dimensions are not yet known. But it is already clear that he will rely heavily on electromation to obtain maximum profitable production and to increase his average hourly income.

The term electromation describes an all-inclusive, integrated system based upon engineering and science. It stresses completely coordinated outfits of automatically operated farm machines, installed in buildings scientifically designed for specific farming purposes. Research has shown that electromation will enable one dairyman to produce up to 1,000,000 lbs. of milk per year; or one man to produce 300,000 to 500,000 broilers, several thousand hogs, or 10,000 cases of eggs. Obviously such production as this offers the best hope for the future prosperity of farm workers. But it must be recognized at the outset that the electromation concept rules out piecemeal approaches. To be effective the system must be complete, fully automatic, and each machine must be functionally related to each other machine.

Consider dairying in relation to this concept. When fast milking first was introduced, one man milking 20 cows per hour with two milking units was considered remarkable. But in 1956 it was established that, with this method, the milking units were idle an average of three minutes between cows. When a third stall was added to get the cows

ready for milking, the idle time was cut to less than one minute, and some dairymen were milking 30 cows per hour.

In 1957 the herringbone milking parlor was brought to this country from New Zealand. A year later Purdue University reported that, handling four milking units in a two-sided herringbone parlor, one man could milk up to 50 cows per hour, including machine stripping. With no machine stripping, the man could handle five units and milk up to 60 cows an hour. Next, a California manufacturer developed devices for further improving the milking procedure—devices which can be used with any conventional milking machine. In operation, the milk flows by vacuum to a small sealed container. One pound of milk is pumped from the container at a time, with little turbulence, through a clean-in-place pipeline to the bulk milk cooler. The milk produced is recorded pound-by-pound on a dial. A plastic bottle can be attached to secure a sample for butterfat testing. A red light flashes when the cow has nearly finished milking, or if a teat cup drops off.

Meanwhile, electronic development enabled the dairyman to feed concentrates to each cow, with the number of pounds fed based upon the quantity of milk produced. Grain and other ingredients that make up the ration can be blended, ground and mixed automatically on the farm, and delivered by conveyor or pipe to bins, or directly to the cows.

In 1957 W. E. Petersen, Minnesota dairy specialist, confirmed that, with scientific milking parlor, carry-away pipeline and bulk storage, one man can milk and feed hay, silage and grain to 100 cows in an eight-hour day—a four-fold increase.

Today an Idaho dairyman feeds grain and milks 120 cows in two hours in a six-stanchion parlor. Milking, plus caring for the equipment, milking parlor and milkhouse, takes ten hours each day. A second man feeds the roughage. The number of hours of work per cow per year is far below the 111-hour 1960 national average.

On 244 Massachusetts dairy farms averaging 28 milk cows and 21 non-producers, it took an average of 232 eight-hour days per year for those who did the various operations manually, as compared with 81 eight-hour days for those who used more efficient methods.

Modern, functional design of dairy buildings is important in the production picture. The time to do chores on surveyed Illinois dairy farms was reduced to 67 man-hours per cow per year in remodeled or new dairy buildings with proper equipment, as compared with 119 hours for buildings not so remodeled and equipped.

Thermostatically operated fans will help greatly to maintain favorable conditions in the dairy barn. Mechanical ventilation of the milkroom and milking parlor is necessary to control odors, moisture and temperature. The University of Wisconsin finds that 6 air changes per hour during the winter and 12 for the summer are satisfactory. This may vary in other areas.

A temperature of 50 degrees F. seems desirable for the comfort of the operator in the milkroom or milking parlor, and to prevent pipe freezing

in coldest weather. Heat lamps or electric heating cables embedded in the floor may be used for this purpose. Or the heat removed from the milk by the bulk cooler condenser may be used for this purpose. Electric resistance heaters equipped with blowers are used extensively in milkhouses.

Water availability is a "must." Iowa State University found that cows with water available at all times drank 18 percent more water than cows watered twice daily, produced 3.5 percent more milk, and 10.7 percent more butterfat.

Mechanizing the movement of materials in bulk has aided greatly in the advancement of farm production. Time saved in removing silage with an unloader from a vertical silo has been estimated at 200 hours per year. Another researcher reports a saving of 20 minutes per ton and still another 20 minutes per day when feeding 39 dairy cows and livestock. Automatic mechanical silo unloading costs only two-thirds as much for a 60-cow herd, and one-half as much for a 100-cow herd as does unloading by hand, according to reports from the University of Illinois.

Moving silage by conveyor from the silo to the cow in the stanchion dairy barn, with the quantity per cow predetermined, has been accomplished at the University of Wisconsin.

The automatic gutter cleaner saves much time by removing manure from the dairy barn. When manure was removed by hand, it took ten times as long as when the job was mechanized, according to experiments conducted at the University of Massachusetts.

A future issue of RURAL LINES will contain facts relative to the application of electromation to large chicken farms, egg and broiler production, and the handling of beef cattle and hogs.



# RECREATION IS A GROWING BUSINESS



Recreation—the art of having fun—is a multi-million dollar business in the United States. It is destined to get bigger if, as one fact-finding organization estimates, the standard scheduled work-week goes down to 36 hours by 1976, three hours less than now.

An indication of how much REA electric borrowers are involved in this business—and how much they *can* be involved—is shown by statistics on seasonal consumers. In calendar 1960, borrowers reported that seasonal consumers, including camps, parks, outdoor concessions, cabins, used 94 million kilowatt-hours, and paid almost

\$5.8 million for that power. Slightly more than 300 borrowers, in almost all areas, reported this type of use.

Much of it is in the north central (Minnesota - Wisconsin - Michigan Great Lakes) area. On the eastern seaboard, the state of North Carolina, whose third largest industry is tourism, stands out.

In North Carolina's eleven counties, about \$38 million was spent on travel and recreation in 1960. Of this, \$21.5 million went to hotel, motels, restaurants and cafes, and \$1.5 million was spent on amusements. Local people

*Recreating old West has become tourist attraction in North Carolina.*



estimate that 60 percent of the total amount was spent by out-of-state visitors.

The Cataloochee ski slope on Fie Top Mountain, served by the Haywood Electric Membership Corporation of Waynesville, operates as a dude ranch in the summer, and thus is a good example of a year-round recreational load for the REA borrower.

Haywood Electric also serves Ghost Mountain Park, which promises to develop into an outstanding tourist attraction. A development corporation, in which about 25 percent of the stock is held locally, has bought the top of Buck Mountain, overlooking famed Maggie Valley, and built three different types of villages there—Western Town, Mountain Town and Mining Town. Two others are planned: Mexican Town and Indian Village.

Western Town has 22 businesses which are outfitted in the vogue of the 1880 West. Saloon arguments spill out into the street every hour during the height of the season, and they are “settled” with Colt 45’s, according to the code of the West.

The cooperative also serves Ghost Mountain Park, where it has installed about 100 security lights, including 46 post “gas” lights, modeled after old-fashioned street gas fixtures.

Another recreation development of great potential to the same cooperative is Lake Toxaway Estates, in Transylvania County. Here a newly formed development corporation plans to sell 600 lots and to build two golf courses, boating facilities and restaurants.

The Surry-Yadkin Electric Membership Corporation, Dobson, N. C., reports that the town of Dobson is promoting a recreation center to include a swimming pool, tennis facilities, and a playground. This is primarily a rural community. Similar promotions may

be expected in other rural communities which do not have natural beaches or lake facilities for swimming.

The French Broad Electric Membership Corp., at Marshall, N. C., will cooperate with the Area Redevelopment Administration in the development of recreational and tourist facilities in Hot Springs, N. C.

The Blue Ridge Electric Membership Corporation, Lenoir, N. C., has a finger

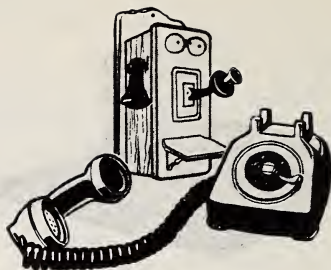


in the recreation pie, too. It not only serves a complete Western village in the “heart of the holiday highlands,” near Blowing Rock, N. C., but also provides power for “Unto These Hills,” an outdoor summer presentation that attracts audiences from all sections of the country.

These examples of co-op-powered recreation in one state are enough to indicate that a dynamic is at work. The children of today are acquiring experiences and skills in things like swimming and camping that their parents never had. This new generation, as it grows up, will spend a great deal more leisure time outdoors than their parents did, and so will their children, and their children after them.

The evidence is plain that REA borrowers in every part of the Nation will need to provide ever-increasing power loads to recreation areas. There is virtually no limit to the power growth that proper exploitation of recreation can make possible. □

# *The New Look in Rural Telephony*



A feature of rural America 35 years ago was the prevalence of the independent telephone system. At that time 60,000 independent telephone organizations were in existence. Twenty-five years later this country had fewer than 6,000 independent telephone organizations. Last year the count was little more than 3,000.

As REA Administrator Norman M. Clapp has pointed out, much of this consolidation was the logical, often necessary, accompaniment to the business of "going dial" and of upgrading obsolete rural systems. The Winnebago Cooperative Telephone Association, which serves 4,000 families in southern Minnesota and northern Iowa, illustrates how successful such an operation can be—although it is far from typical in some respects. The Association represents a merger during the past 12 years of 47 tiny telephone co-operatives.

The farmers and townspeople who own the sprawling rural cooperative took advantage of several favorable circumstances:

- The telephone loan program started by Rural Electrification Administration in 1949.

- A successful, well-managed electric cooperative that already served a good part of the territory.

- A chunk of territory including all or part of 6 Iowa counties and 2 Minnesota counties without any large city.

- Plenty of far-sighted, willing volunteers.

- Cooperative know-how built up through the organization and growth of several thriving elevators, creameries, petroleum and farm supply co-operatives.

The telephone co-op is not typical because its board and management run both electric and telephone cooperatives. While electric co-ops have helped get a number of telephone co-ops going in this region, they usually stepped aside when the organization job was completed.

REA officials say it takes an unusual combination of management skills to run a joint telephone and electric operation, but Winnebago members found this in their manager, Glenn Bergland. He is a hustling, energetic man who has been with the electric cooperative for more than 20 years. He told nearly 2,000 members and their families at the annual meeting March 28 at Forest City, Iowa, that REA has approved another \$152,000 loan for the telephone cooperative.

This loan will bring dial service to nearly 300 subscribers around Kensett in Worth County by August. As soon as the ground was ready last spring, workers began moving equipment along country roads in the Kensett area, plowing in the underground cable developed through REA research to give better service.



The telephone co-op is not through growing yet. Families who own a couple of adjoining small co-ops are dickering with Winnebago for service.

"You'll get DDD (Direct Distance Dailing) as soon as Bell is ready to connect with us," Bergland promised. DDD allows a person to dial directly to people in many parts of the country without going through an operator. Complex machines automatically record the call and keep track of the time you talk.

Small independents still operate in "island" towns that are surrounded by the cooperative.

"Where the cream is, we aren't," says President R. E. Aukes. "Just imagine what we could do if we could serve Buffalo Center, Lake Mills and Forest City. We didn't get any territory that looked like it had money in it."

Yet the co-op has done very well in the more sparsely settled rural areas. In 1961, members saved more than 17 cents out of every \$1 they paid in telephone bills. Taxes claimed nearly 9 cents, interest and depreciation about 30 cents, and operating costs about 44 cents.

Bergland told members that "half of our bookkeepers' time is spent figuring taxes—excise, sales, gross earnings and property." Iowa property tax amounts to \$4 a year per subscriber, and Minnesota's gross earnings tax adds up to \$2 per subscriber. The co-op is checking into electronic equipment that will speed up bookkeeping and save operating costs.

Directors and management are also checking to see whether they can help set up more business and industry in the small towns of the area.

"Let's face it," he warned. "We lost 123 farmsteads in the past 10 years.

Efficient farmers are taking over more land, and if we want to keep our young people at home we'll need jobs for them."

Bergland told members they are enjoying rates "as low as any in this part of the country when you consider the amount of extended area or toll-free service." The average rural resident pays \$3.92 a month including tax. Many homes have 2 or more phones, with extensions costing \$1 a month.

The telephone business is "nickels and dimes," compared to "dollars" in the electric business, says Bergland.

"A telephone operation takes more people, and we have 10 problems in the telephone end for every one in the electric," he says.

Bergland and his board believe the combined operation has worked out well, even though it took "lots of work." But where the territory of the two types of cooperatives is about the same, members can save money, especially on office help.

Was it easy to effect the telephone mergers?

"No!" says Bergland. "Too many meetings. Sometimes we'd hold as many as 6 in a day, getting all those little co-ops together. But we had lots of volunteer help.

"It took a two-thirds vote of the co-ops if they were incorporated to bring them into the big family. But if they were unincorporated, we had to get 100 percent of the subscribers, and that took some effort. Naturally we had some opposition and a few nasty letters, but I think nearly everyone is pleased with how it has worked out."

*(Adapted from an article by Bill Selden in the April 9, 1962 issue of the Midland Cooperator.)*

## TOTAL AREA DEVELOPMENT

Rural areas which appear to have left their future behind them can draw hope—and guidelines—from the strong comeback being made by northwestern North Carolina. Abundant, low-cost power is the dominant force, after people, in this dramatic revival of a depressed region.

Until 1935 the 8-county area now served by the Blue Ridge Electric Membership Corporation at Lenoir was known to some as the "Lost Province." Name any drawback and it was to be found: poor roads, no railroads, very low farm income, poor schools, ramshackle housing, inadequate communications, and scant electric power. Today, Lenoir's booming furniture industry attracts workers from the mining communities of southwest Virginia. Blue Ridge EMC alone is gaining 1,000 *new* homes a year, and farm income doubled between 1954 and 1959.

The key to this success story is *total area development*, which can be best understood, perhaps, by studying the organization which is using it to reshape the economic destiny of the 11 counties that stretch along under western Virginia to the Eastern Tennessee border.

The Northwest North Carolina Development Association is a nonprofit, voluntary organization chartered by the State of North Carolina "to promote, through regional cooperation, the industrial, agricultural, and recreational well-being of the area comprising the counties of Alexander, Alleghany, Ashe, Caldwell, Davie, Forsyth, Stokes, Surry, Watauga, Wilkes and Yadkin."

The Association has a board of directors consisting of three persons from each of the eleven counties. Activities of a regional nature are carried out through five divisions—agriculture, community development, industry, travel and recreation, and youth. Each division has an overall chairman and vice-chairman and individual committees in each county. The county committees plan and decide on projects and work with community groups to accomplish their objectives.

Hugh Crigler, Jr., 1962 NWNCD A president and a Blue Ridge employee, says: "We don't try to do anything for the counties except lay down basic guidelines for them to follow in pursuing their own goals. The basic responsibility for improvement rests with the local people—they have the need, and they also have the means to fill the need."

A look at the NWNCD A budget confirms his point. It is a low, almost nonexistent, budget. Dues account for \$550, or \$50 per county per year. Sponsors and participants pay for certain projects, such as the annual meeting dinner. The Association pays no salaries and the dues just about cover stationery, telephone calls, postage and the annual report. The Winston-Salem Chamber of Commerce provides an executive secretary and contributes nominal secretarial assistance.

Money can't buy the time, the interest, imagination and goodwill that really power the NWNCD A and its county and local units. A look at its Industrial Planning Group makes this clear. This group offers to perform



*Total area development means jobs and incomes, helps members of Blue Ridge EMC in northwest North Carolina build new homes at rate of 1,000 per year.*

special research without charge for any firm interested in locating or expanding in northwest North Carolina. These on-the-spot investigations cover the labor picture, water and other resources, marketing and distribution, and taxation and financing.

The group can call on more than 2,000 plant managers and engineers, personnel and production men to dig out, process and package the information an industrial prospect requires to weigh his entry into NW Carolina. Task forces have already prepared an attractive brochure on the services and resources open to prospective industry, plus general reports on water resources, training rates and training curves, corporate taxation in North Carolina (the State promises equitable treatment, but no concessions), and marketing and distribution data.

Regional cooperation is also working magic on northwest North Carolina's basic industry—agriculture. The chairman of the agriculture division is able to draw on the resources of North Carolina State College, the extension

service, and other institutions to push farm development.

The ag division works through 10 commodity committees: swine, forestry, flue-cured tobacco, small fruits and vegetables, grain production and storage, apple production and marketing, beef cattle and sheep, poultry, and dairying which has two committees, one for "Grade A" and another for manufacturing milk. Most counties have at least three representatives on each committee. The committees arrange meetings and tours for producers who are looking for ideas and methods to improve their own farming operations.

As a result, farmers in the 11-county area realized about 29 percent more cash from their farms, orchards and forests in 1959 than in 1954. Over the state, the five-year gain was only 9 percent. The three counties with the lowest farm incomes—Ashe, Caldwell and Watauga—boosted farm marketings more than 50 percent in this period. NWNCDAs estimates show a continued rise in area farm income through 1961.



New industry also contributes to the improvement in farm fortunes, NWNCDAs leaders say. It works this way: when the wife gets a job in a textile plant and starts bringing \$50-55 home every week, the husband can farm better because he now has the cash to buy fertilizer, hybrid seed, insecticides, better breeding stock, and so forth.

The farm groups are concentrating on improving present farm enterprises and on squeezing a profit from the highly competitive production of broilers and milk for manufacturing. Attention is also being paid to such new cash-producing possibilities as producing feeder pigs for sale to eastern Carolina farmers (the area raises little feed), vine-ripened tomatoes, raspberries, blueberries, and other small fruits and vegetables.

Some farmers, handicapped by lack of capital and poor buildings, are leaving the land for industry. As a result, the number of farms declined 24 percent between 1954 and 1959, with the industrial counties of Caldwell, Forsyth, Surry, and Wilkes suffering the greatest loss.

Along with community development, the Northwest folks are working to improve education. The area is proud of its most valuable product—its youth—regretful that so many must be “exported” to other markets, and determined to reduce the heavy dropouts in rural counties. So the counties are upgrading their schools through consolidation and better pay for teachers. Ashe, Surry and Watauga counties each have three major high schools which replaced nine or more smaller secondary schools. These new schools offer better facilities, a wider curriculum, and career guidance. The next step will be to introduce industrial courses and provide industrial education for adults and dropouts.

REA electric and telephone borrowers in the 11 counties have supported—and benefited from—total area development under the NWNCDAs. In addition to Blue Ridge, they are the Surry-Yadkin EMC and the Surry Telephone Membership Corp., both of Dobson, the Davie EMC at Mocksville, Skyline TMC at West Jefferson, Wilkes TMC at Wilkesboro, and the Yadkin Valley TMC, Yadkinville.

Because it serves in 7 of the 11 northwestern counties, Blue Ridge EMC has the closest ties to NWNCDAs. Manager Cecil Viverette is chairman of the Caldwell county industry committee and Herman Anderson, director of power use and public relations, represents Caldwell county on the Association board. Also serving on the board are Hugh Crigler, manager of the Ashe district, and James Allen, Jr., Alleghany district manager; other employees work on various local committees. As 1962 president of NWNCDAs, Crigler must spend about one day a week on Association business, so the Blue Ridge cooperative has a growing, substantial investment in this regional development program.

The dividends are even bigger. Blue Ridge serves two textile plants direct which can be credited to NWNCDAs, and two others indirectly through a college-owned New River Light and Power Company at Boone which buys its power from Blue Ridge. Three of the factory buildings were financed by local people.

Blue Ridge has no compunctions about “bird-dogging” non-agricultural industries. One of its directors was with the North Carolina Department of Conservation and Development when a New England industrialist requested information on possible sites for a new plant. Blue Ridge worked with local people to obtain the plant, and provided the low industrial power rate needed to cinch the deal. Today this

plant employs 900 people, uses 18 million kwh annually.

In all, Blue Ridge serves 20 industries, ranging from sawmills to the aforementioned large plants. These have created 5,000 new jobs, with 3,500 contributed by the new plants moving into the area in the last seven years.

The impact of the new jobs is shown in Blue Ridge operations. Membership has increased from 14,500 in 1953 to almost 19,000 now. Energy sales more than trebled, from the 33.6 million kwh delivered in 1953 to the 124 million sold last year. Revenues rose from \$921,322 in 1953 to \$2,176,824 in 1961. Net margins also increased, from \$68,700 in 1953 to almost \$187,000 last year, despite a 10 percent rate reduction in 1960.

Satisfying as this record is, Blue Ridge and Manager Viverette believe that three factors will bring further growth to the area and the cooperative:

1. New home construction made possible by rising family income from industry and new and improved farming methods.
2. Tourism and recreation as they become year-round activities with the development of winter resorts and attractions.
3. Further industrial development, based on local products and resources.

A newly-completed long-range financial study forecasts five additional in-

dustrial power users and a total membership of 24,700 for Blue Ridge by 1971. This also shows that annual operating revenues will exceed \$3 million by 1965, \$4 million by 1969 and \$5 million by 1971. Load will double by 1967 and reach 381 million kwh by 1971. Farms account for half of the expected 220 million increase in sales between 1961 and 1971.

Viverette is counting on "home grown" industries to provide a large share of the future expansion. New capital needed for expansion is being arranged for a family wood products firm which can't meet its present demand with existing plant. The Blue Ridge manager also counts on efforts to process more of the vegetables and farm products at home and to keep canning plants operating all year.

These, plus better utilization of all the resources of the area, are on the roadmap Blue Ridge and NWNCDAs are following to a better future.

Documenting their success is this sidelight. When the electronics firm opened up its plant in 1953, it had to bring in a dozen top executives from New England to run the show. Today all except one of these positions, including plant manager, are filled by Ashe county natives who went away for college training and jobs all over this country, but returned home when opportunity beckoned.



*New consolidated school in Ashe County, N. C.*

# WHAT A GROWTH AREA LOOKS LIKE

If the future is as good as the present, residents of rich, wet 'n' wonderful South-Central Kansas will have little to complain about.

Five years of ample moisture have yielded rich wheat crops, still one of the economic keys in this area. In one county farmers grossed 29 bushels an acre, the highest in history. Production of milo, barley, corn and livestock has doubled the wheat income.

Oil drilling has become a major industry. Local small industries are producing farm implements which farmers are buying in greater numbers than before.

Under a canny, experienced manager and a strong board of directors, Ark Valley Electric Cooperative Association, which covers a large area around Hutchinson, is sharing in this prosperity, and expects to do just as well in the future.

Chartered in 1939, Ark Valley Electric was serving 1,238 consumers on 607 miles of line before World War II started. Average use per month per consumer was 40 kwh. In 1945 it had 1,701 members, using 110 kwh per month on an average. Now it has 2,850 members, on 1,750 miles of line, who use 570 kwh per month. Projecting the curve another 3 years, the average kwh consumption per member per month in 1964 will be 657.

Because of this growth in the number of consumers and amount of consumption, the cooperative, which now has 9 substations, will be adding 3 more during the next few years. It notifies its members of capital credits allocated each year, pays estates, and will soon be 2 years ahead in its REA payments. It paid a total of \$34,835 in taxes to 9 counties in 1961. Its operating margins

have climbed from \$18,471 in 1955 to \$51,594 in 1961.

But the story is not one of simple growth. It is a case of where several favorable factors are outweighing a few unfavorable ones. On the debit side is the fact that, during the past 7 or 8 years, 40 to 50 farms have been abandoned annually. The cooperative is therefore losing the "minimal" billings.

One of the elements now helping to take up the slack is the development of oil drilling. Electricity is used to pump water out of wells, and push the oil from various pipeline gathering points to underground storage. It is all done by automation, says manager Curtis A. Stubbs, who appreciates this new power load but worries at the same time about automation's effect on unemployment.

Electricity is also used in producing propane gas, for this is a natural gas area. Despite this, 12 percent of new homes being built are electrically heated.

The cooperative is also busy supplying electricity to new consolidated schools and small industries.

However, the main occupation is still the growing of wheat and small grains. In 1945 Ark Valley Electric's consumers were all farmers; now only 70 percent are farmers, and of these about one-third do other work as well. Commercial and industrial users now buy 7 million kwh annually, while 12.5 million kwh are purchased by residential and rural users.

The sound condition of Ark Valley Electric is not entirely due to favoring economic winds. Manager Stubbs, who first joined the organization as an electrical inspector in 1939 and has been



manager since 1956, lets no grass grow under his lines.

By participating in 4-H Club and other community activities, and by placing institutional advertisements in the local newspaper, he insures that the people of Hutchinson look favorably upon the cooperative. He does not

serve the town, of course, although his offices are located there—in a converted post office.

Ark Valley Electric shares booths in the local home shows and floats in parades with one of its commercial suppliers.

Mr. Stubbs insures a good turn-out



*Headquarters building of Ark Valley Electric is former post office.*

(about 700 people) at his annual meetings by presenting a small gift to every member in attendance, offering reduced rates on other appliances, and providing lavish door prizes. Total cost is approximately \$600 per meeting. The meetings are held in the afternoon; no meals are served.

His 10 linemen are members of the International Brotherhood of Electrical

Workers, with whom he has a contract.

Every director delivers a report on some phase of the Association's work at the annual meeting.

With such sound realistic management, increasing diversified industry, more oil drilling, and bumper wheat and grain crops, Ark Valley Electric contemplates the future with optimism and equanimity. □

## REA Generation and Transmission Loans Look to Future Needs of Rural America

To meet the needs for power of rural America in the decades immediately ahead, the Rural Electrification Administration is making bigger generation and transmission loans than ever before. In part, this reflects an industry-wide trend toward bigger—and more efficient—generating units.

A \$36.6 million loan for the largest single-unit plant ever financed by the agency was approved on May 10, 1962 to the Basin Electric Power Cooperative, a new borrower with headquarters at Bismarck, North Dakota. The new 200,000 kilowatt plant will be fired with lignite coal and will be located close to vast beds of this fuel. Fifteen miles of 230 kilovolt transmission line will connect the plant with U.S. Bureau of Reclamation facilities at Garrison Dam, and the plant's power will be transmitted to member cooperatives over Bureau lines.

Basin presently plans to serve 61 REA-financed cooperatives in the Upper Missouri Basin, but REA has stipulated that Basin retain open membership so that it can offer all REA electric borrowers who possibly could be served by the new plant an opportunity to receive power from the new facilities—so far as capacity will permit.

The largest loan ever approved by REA was made in 1961 to the Hoosier Cooperative Energy, Inc., Osgood, Indiana. It will finance construction of a 198,000 kw steam generating plant near Petersburg and a transmission line network. Hoosier is a federation of 16 electric distribution cooperatives in Southern Indiana which serve 72,000 consumers. During 1960 these consumers used approximately 370,643,000 kwh; it is estimated that they will need about 654,700,000 kwh during 1967.

In November 1961, Alabama Electric Cooperative, Andalusia, Alabama,

received a \$20,350,000 loan to finance construction of a 66,000 kw steam electric generating plant near Jackson, a transmission line network and related facilities. This was the first REA loan to be approved under REA's newest G and T criterion, to assure "the security and effectiveness" of the borrower systems. Alabama Electric, which now serves 6 distribution cooperatives, will be able to serve an additional 3 cooperatives when new facilities are finished. In 1960 consumers served by the 9 cooperatives used 271 million kw. In 1968 their power needs will reach 690 million kwh.

Other major generation and transmission loans made during the past year and a half have gone to Arizona Electric Power Cooperative, Inc., Willcox, Arizona (\$19,840,000); Colorado-Ute Electric Association, Inc., Montrose, Colorado (\$15,602,000); and South Texas Electric Cooperative, Gonzales, Texas (\$14,683,000).

In a recent review of REA's generation and transmission program, the Senate Committee on Agriculture and Forestry rejected proposals to eliminate provisions in the Rural Electrification Act of 1936 that authorize such loans. It reported: "... to the extent that investor-owned companies make power available to REA borrowers at fair and reasonable rates, and on terms which permit them to serve all eligible customers within their service areas, the need and justification for loans for generating facilities disappears. Correspondingly, to the extent that investor-owned companies will serve REA borrowers only on conditions which are not fully fair and reasonable, or which restrict the REA borrowers to the most unprofitable customers, the need for loans to construct generating facilities is increased." □



*Poles set in ocean are a common feature of Florida Keys Electric.*

## A NARROW CO-OP WITH BROAD INTERESTS

From the Florida Keys, an area that is traditionally strange and paradoxical, comes a report that illustrates the need for flexibility, alertness and co-operation if people and organizations are to keep pace with the rapid changes that are taking place today in rural America.

Here is located "the highway which goes to sea"—U. S. 1 which goes island-hopping below Miami for 150 miles. Here a charter-boat captain uses Florida lobster—50 cents a pound wholesale—for bait. The same Keys-born captain, Eugene Lowe, is president of an unlikely REA-financed power system, the Florida Keys Electric Cooperative, which services an area 70 miles long but only a few miles wide at its broadest.

This unusual co-op is engaging in the odd activity of helping members get Farmers Home Administration loans.

It all started last fall. Co-op Vice-President George Miller, Attorney Ralph Cunningham, and Manager Jim Phillips made a trip to Washington on co-op business. While there, they

dropped in on a meeting of association managers who were discussing ways of strengthening the statewide association in Florida.

At this meeting representatives of the Farmers Home Administration explained certain features of its program newly approved by Congress. One of these features provides for home loans to owners of non-farm tracts in rural communities with populations of not more than 2,500, if the owners, among other requirements, are unable to obtain credit from other sources. The interest rate is 4 percent and repayments are in accordance with the borrower's ability to repay, over a period not to exceed 33 years.

The Florida Keys trio listened carefully.

The Keys had recently lived through a financing crisis. Hurricane Donna in September 1960 had destroyed or badly damaged most of Marathon, western end of the co-op system, and substantial parts of Tavernier, Islamorada and the areas between. Rebuilding on a large scale had been necessary—and it had been accomplished;



the visitor now sees almost no signs of the vicious storm's passage.

Rebuilding completed, the Keys settled back to the normal growth pattern. Florida Keys Electric sold 11 percent more kilowatt-hours in 1960 than in 1959, and 17 percent more in 1961 than in 1960. Many new houses went up, but many more were needed to meet the demand. Unfortunately for the Keys, Miami, a fast-growing city where the most and biggest banks are, had its own uses for capital, and mortgage money was hard to come by in the islands. So another financial crisis was at hand.

Farmers Home Administration looked like a possible answer. At least, it looked that way to the Keys people. But not, at first, to FHA. Meetings, conferences, correspondence went something like this:

"The Keys? We can't make loans down there; we are limited by law to rural areas."

"We are rural. There is only one small incorporated town between the mainland and Key West, and that is brand new. You finance rural non-farm homes in other areas."

"Yes, but you are a resort area, and we can't finance even motels, let alone hotels."

"We are talking about homes. True, many of our people operate businesses catering to tourists. But they live there all the year. Besides, more and more of our new people are building rather modest retirement homes."

"These plans don't look modest; look, two bathrooms."

"That's a pretty standard feature on the Keys, rather than a luxury. You have to have that second bathroom if the house is to be readily marketable, and that's an important factor in the safety of your loan."

"Maybe so, but air conditioning . . . !"

"What's wrong with that? You

finance furnaces in Michigan and Minnesota. In fact, you wouldn't think of financing a house there without one. Again, an area standard—and fine security for marketability."

And so it went, with FHA objections crumbling under the persistence of Keys Electric arguments. Finally, the decision came to go ahead . . . voiced cautiously at first, but with growing enthusiasm as need and worthiness became increasingly apparent.

In this Farmers Home Administration program, Florida Keys Electric Cooperative serves strictly as a catalyst. Its work falls into three phases. The first, described above, was to become acquainted with the program and to assure its applicability to the Keys.

The second step was to let Keys residents know about the program. To do this, the co-op took double-page ads in the area's newspaper, and erected a huge billboard, fluorescent-lighted, to inform all who come to the Keys by road of the program's availability.

Third, the co-op puts applicants in touch with the lender. By friendly arrangement with FHA, interested residents file their names with the co-op. When FHA regional representatives come to the Keys, they pick up the lists and with the co-op's help schedule interviews in the co-op's Board room.

Ted and Mary Bartz are now completing the first FHA financed home on the Keys. It is in Marathon, facing the Florida Straits. Not far is Ted and Mary's restaurant and snack bar, brand-new, and spotless. The restaurant is all-electric, and so is the house, which has a heat pump and displays a Gold Medallion.

The Bartz couple are happy about the whole thing. They are proud of their electric co-op, whose generating plant is just up the road a few blocks. They think the co-op is providing a rather special community service. Many other sun-tanned people agree with them. □



*Headquarters building of Butler Rural Electric Cooperative.*

## RURAL OHIO: WHERE CITY AND COUNTRY MEET

"If you want to study changing rural America, try this area," says Everett S. Hoy, manager of Butler Rural Electric Cooperative whose headquarters are at Hamilton, Ohio, an hour's bus ride north of Cincinnati. And indeed, many nationwide trends are evident here: the growing suburbanization of rural areas, a decrease in the number of farms, and a constant, sharp increase in the use of electricity by both the new residents and the remaining farms.

Twenty years ago the area around Hamilton consisted solely of family farms. They raised wheat, corn, dairy products, hogs and cattle. Now half the population consists of suburbanites who commute from Cincinnati, Hamilton, Middletown, Dayton and even Richmond, Indiana. In another few years, these commuters will be in a majority.

They have built neat, trim homes which use almost as much electricity

as farms, thanks to the spreading popularity of electric hot water heaters, ranges, dryers and washers. One third of these houses are being built with electric heating.

Though the number of farms is decreasing, those which remain use more electricity than ever—600 to 700 kwh per month. Much of it goes to power milkers, coolers, and feed handlers, but the farm wife often uses more than her husband. Many farmers are converting their homes to electric heat. And many, with spreads of 50 to 100 acres, work in the city part-time, another innovation.

Manager Hoy expects these trends to continue. He predicts that by 1970 the number of member-consumers, now 3,000 on 600 miles of lines, will increase by almost a third. Total sales will increase 118 percent; average consumption, now a handsome 450 kwh per month, will increase 66 percent.

These trends spell expansion and prosperity for Butler Electric. In 1947 it had one 600 KVA substation, 50 percent overloaded. Today it has 8500 KVA capacity and four substations; it expects to build two more substations during the next few years. Its advance payments to REA total \$150,000.

A professional accountant, Mr. Hoy started working for electric cooperatives in 1936. He worked for two other REA-electric borrowers before coming to Hamilton in 1947 as manager of Butler Rural Electric. He directs his staff of 8 linemen, 5 office people and one power use advisor with efficiency, uses billboards to spread his organization's message, and encourages use of his handsomely-equipped community room by various organizations. They do use it—on an average of three times a week.

Relations of the cooperative, which was incorporated in 1936, with its commercial power supplier are good.

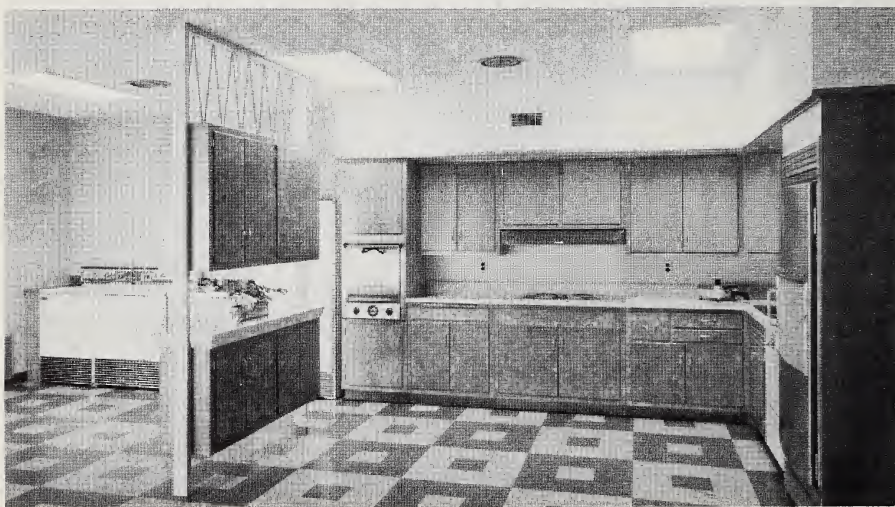
This is not to say that Butler Electric is free of headaches. Interruptions of service by lightning and brush growth keep the organization constantly on the

alert. It budgets \$15,000 a year for tree clearing; over the past 15 years it has spent over \$250,000 on tree trimming and bush spraying.

Perhaps an even greater problem—again fairly typical—consists of integrating the new members from the city who are joining the cooperative. This problem shows up in the difficulty of obtaining 5 percent of the membership to attend the annual meeting, although dinners are served at \$1.25 each, half of what it costs the cooperative, and an outside speaker is obtained. The time of meeting has been changed from January, in order to avoid inclement weather, to April, but this conflicts with spring work, particularly for dairymen. Manager Hoy and his capable board of directors, headed by Howard Wolfram, who raises Black Angus cattle, are wrestling hard with this problem.

Butler Electric is performing its job. It is supplying increasing amounts of power, at reasonable cost, to an increasingly diversified population, for increasingly varied uses.

*Kitchen of Butler Rural Electric gets much use from community groups.*





# VICTORY AT DODGE CITY



*Famed Boot Hill, Dodge City, Kansas.*

In a country as large as ours, change never occurs at an even rate.

No matter how widespread and fundamental the trends which sweep throughout most of America, there will always be sections where changes take place slowly.

In an area where suburbanites are spilling over from the city, where new industries and recreational centers are coming into existence, an electric cooperative can show a great increase in the number of its consumers and in the amount of power being consumed.

Where none of these things are taking place, progress can still exist. In such an area, an organization can be measured in terms of steady growth and performance of a needed service. Victory Electric Cooperative Association, in Kansas, represents this kind of a progressive institution. It serves a wheat-growing area a few hundred miles west and south of Wichita. With headquarters in Dodge City, it is typical in many ways of the early cooperatives which played such an important role in bringing electricity to rural areas.

The dominant fact about Victory Electric is that the average number of consumers it serves per mile of line is—one. The cooperative has 1,610 miles of line—and 1,640 consumers.

The Association does not expect any great economic or social changes to take place in this area. Whatever new industries enter will be located along the main highways—which are already served by commercial companies. The number of farms will not increase. In fact, about 30 family farms go out of business each year. The cooperative pulled out 72 services in 1961, and expects to pull out another 45 in 1962. The remaining farms are larger and prosperous. There are no oil wells, as there are in central Kansas. The growing of wheat, milo maize and other grains is the main occupation. Two cattle markets are prominent, and, very recently, a tourist business based on the magic epic of frontier America has grown up. To encourage this business, the name of Front Street has been changed to Wyatt Earp Boulevard, and frontier stores have been established.

If Victory Electric does not symbolize the changing face of rural America, what does it represent? It represents—and there can be no quibbling about it—a solid achievement in supplying electricity, at reasonable rates, to its widely scattered customers. This cooperative, which operated in the red for 6 years after its first lines were energized in 1947, last year achieved

margins exceeding \$30,000. It recorded 6 percent capital credits. And it sent \$11,399 to the Rural Electrification Administration for a total of over \$107,000 in advance payments, putting the cooperative a year ahead.

It is a cooperative which has converted 200 miles of its 1,600 to three-phase lines, and another 100 to two-phase lines. It did 18 miles of conversion last year—using its own crew.

Average consumer use is 469 kwh per month, half for homes, and half for cattle feeders, grain elevators, grain conveyors, electric welders, drill saws and air compressors. Seven homes are electrically heated. Other consumers are 31 schools, churches and other public buildings—all small, plus a TV station and three telephone micro-wave stations.

Testifying to the steady growth is an increase in the amount of kwh sold annually from 6,475,000 in 1956 to 8,767,000 in 1961.

Its annual meetings are attended by almost a thousand people. Although it offers a free dinner and door prizes, the main reason why they come is because, as manager E. A. Davidson puts it, "these are the people who just naturally belong to farm cooperatives."

It comes pretty naturally to manager Davidson too. His father was president of the 50-year old Cimarron Cooperative Equity Exchange, and his brother is president of the board of the same grain cooperative. E. A. himself is a

director of the Farmers State Bank of Ingalls, Kansas.

A native of Kansas, he was a successful wheat farmer before the war, served in the Navy, and ran an implement business for five years. He sold out at a profit to return to school (at age 41), got his B. S. degree in business administration from the University of Colorado three years afterward, worked for a public accounting firm in Dodge City which had Victory Cooperative as one of its accounts, and eventually wound up as Victory's manager in 1960.

It takes real work to run a successful electric cooperative in such a thinly populated area. But the secret of Victory's success, manager Davidson thinks, is thrift and flexibility. For instance, he uses part time girls from local colleges for secretarial work as much as possible. His four linemen and superintendent do a great variety of jobs. There are no specialists in the cooperative.

Mr. Davidson expects the trend to continue upward—as old homes are replaced by new ones in this prosperous wheat-growing area; as air-conditioning becomes more popular; as the usefulness of electricity in the farm and home becomes more apparent.

But the area itself will not change very drastically in the future, he thinks. And, as one looks at the endless wheat fields lying flat and green (in spring) under the arching Kansas sky, one cannot help but be glad of it.

# SAFETY — TODAY AND TOMORROW

The need for accident prevention programs will not grow less important this year—nor in the next ten years.

Nationally, in 1961, one of every 20 people was injured. Ninety-one thousand people were killed. Disheartening statistics, yes—but it was the first year in which the fatality rate per 100,000 fell below 50.

REA began its safety and job training activity in 1941. Today it cooperates with organized safety programs in 37 states, reaching approximately 90 percent of the electric borrowers' total membership. Results have been more than encouraging: during the first four months of 1962 no fatalities have been reported by REA borrowers.

This is a happy piece of news. Whether the record continues throughout the year is important—mostly to the wives and families of borrower employees. But perhaps more important is the safety-consciousness that this four-months' spotless record implies.

Safety consciousness is a habit that must be developed and advanced, around the clock, at home as well as on the job. Many REA borrowers have piled up long accident-free records. The Nyman Electric Cooperative, Stanton, Iowa, has worked 725,000 hours in 22 years without an accident. The Inter-County Telephone Company, Gallatin, Missouri, has not had a lost time accident since August 1, 1957—216,000 hours. The Central Florida Electric Cooperative had its last accident in December 1956; since then its staff has racked up 300,000 man-hours of injury-free work.

These are a few examples. There are many other borrowers that have achieved equal or better results. With constant development of new protective equipment and tools, and with management's realization that every worker must be thoroughly trained, more and more lives can be saved every year.

New methods of first aid are being used, and are proving effective. Mouth-to-mouth resuscitation and closed chest heart massage are being used successfully. If these innovations save but one life, they will be worthwhile.

But, in the long run, it will be human beings who will save human beings. In the coming decade, this truism will not change. When people remember to think safely, act safely, and emphasize every day the importance of safety, the accident rate will plummet down to where it belongs—a big, fat zero.

## THIS MONTH

- 3 *Changes in American Rural Life: The General Picture*
- 6 *Power for Tomorrow*
- 8 *Electromotion: Key to Production*
- 10 *Recreation Is a Growing Business*
- 12 *The New Look in Rural Telephony*
- 14 *Total Area Development*
- 18 *What a Growth Area Looks Like*
- 20 *REA G&T Loans Look to Future Needs of Rural America*
- 21 *A Narrow Co-op with Broad Interests*
- 23 *Rural Ohio: Where City and Country Meet*
- 25 *Victory at Dodge City*
- 27 *Safety — Today and Tomorrow*



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## New and Revised REA Bulletins . . .

### New Bulletins:

20-12, 320-16 (4/5/62), "Public Availability and Release of Information." This bulletin states REA policy regarding the release of information on overall REA program activities and on individual applications for REA loan funds.

20-11, 320-17 (4/6/62), "Waiver of Government's Lien on Motor Vehicles of Electric and Telephone Borrowers." This bulletin announces the waiving by REA of the mortgage lien on motor vehicles now included in security instruments of REA borrowers, except in those cases where such action will endanger loan security.

### Revised Bulletins:

440-1 (3/6/62), "Telephone Borrowers' Technical Operations and Maintenance Activities." A revision to list additional sources of technical assistance to REA telephone borrowers and to describe the purpose of operations and maintenance studies.

161-5 (4/2/62), "Guide for Making an Operation and Maintenance Survey of Transmission and Distribution Plant." A revision to encourage electric borrowers and to provide them with guidelines to perform with their own personnel the operation and maintenance surveys formerly made by REA.

320-14 (4/6/62), "Loans for Telephone System Improvements and Extensions." A revision to reflect changes in REA procedures and requirements for supplemental loans to telephone borrowers.

334-2 (April 1962), "List of Materials Acceptable for Use on Telephone Systems of REA Borrowers." A new basic list of materials to reflect the changes since the last basic list was issued in April 1961.

111-2 (April 1962), "Annual Report of Energy Purchased by REA Borrowers." The report of electric energy purchased by REA electric borrowers during the twelve month period ending June 30, 1961.

### Supplements and Partial Revisions to REA Bulletins:

800-2 (2/26/62), "Department of Agriculture Personnel Engaged in Rural Areas Development Program." Revised exhibits to report changes in the names and addresses of Department of Agriculture personnel engaged in Rural Areas Development work.